# Forecast To Fork

mdek12.org

**Betsy Redfern Pennington, MS, RD, LD**

Lead Registered Dietitian Nutritionist

MISSISSIPPI DEPARTMENT OF EDUCATION

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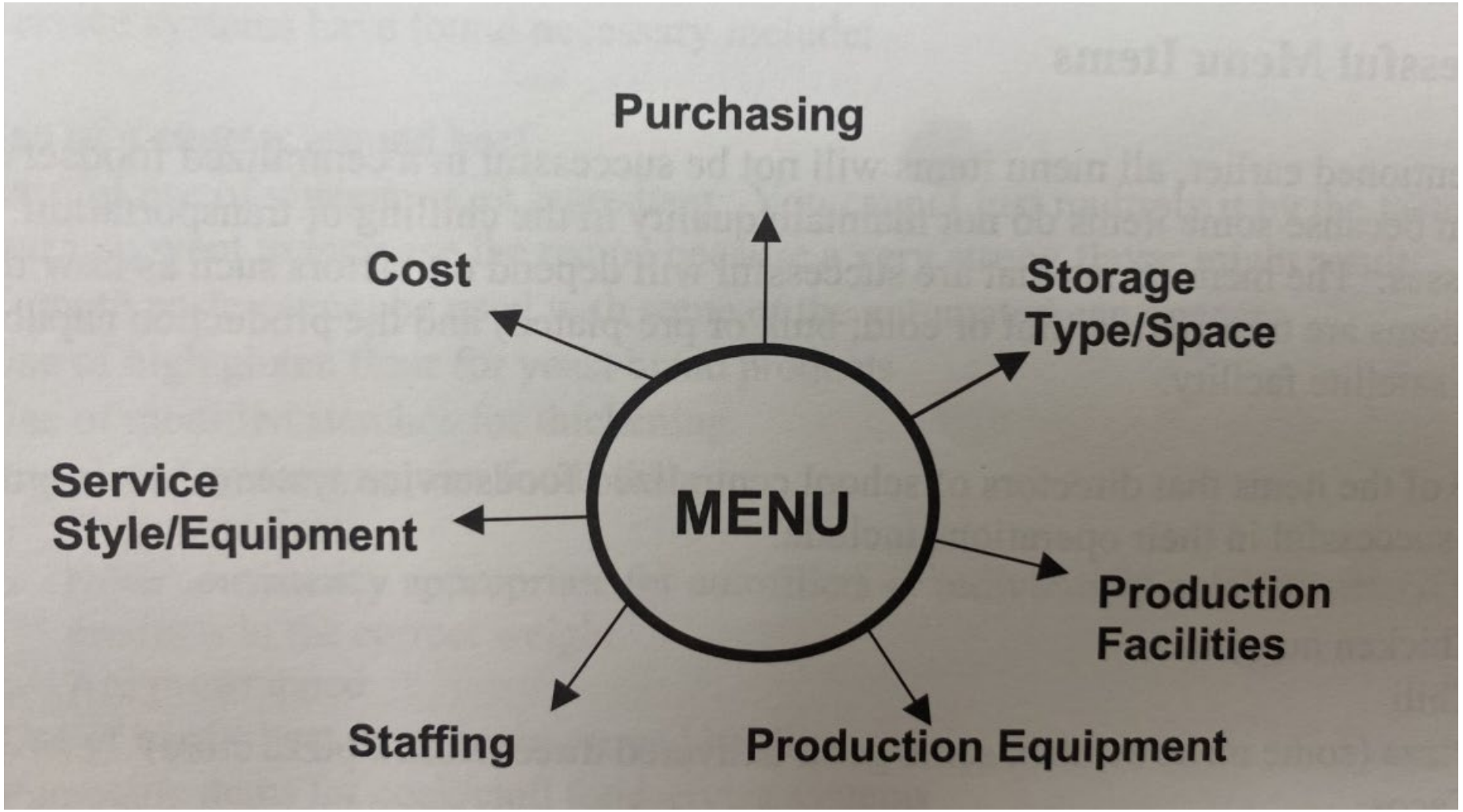
# Menu: The Driving Factor in Foodservice





# Menu: Predicted Number of Servings



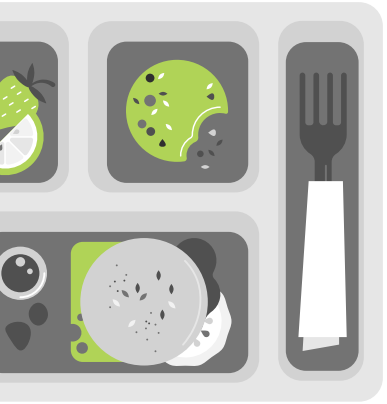
| 2 | 3a | 3b |
|---|---|---|
| MENUS and Recipe Numbers | Plan Prtns | Xtra Prtns |
| BREAKFAST | | |

Your menu also always have to come with a forecasted number.

# Definition of Forecast



**Forecast: for foodservice, predicting future consumer demand for food products, allowing businesses to plan their inventory, production, and marketing strategies**



- **Nutrient Analysis/ Meal Pattern Compliance**
- **Budget/Food Costs**
- **Marketing**
- **Meal Pattern Compliance**
- Inventory
- Staffing

# Many districts are menu planning without consideration of historical data.

Menu planner creates menu and conducts nutrient analysis without utilizing production record.

Menu is sent to program staff and adjustments are made to fit student selection preferences.

Food offered or quantities offered are drastically different than planned menu/nutrient analysis. Explanation of changes is not recorded in production record.

Production record is stored, but never reviewed by menu planner. Nutrient analysis is never adjusted.

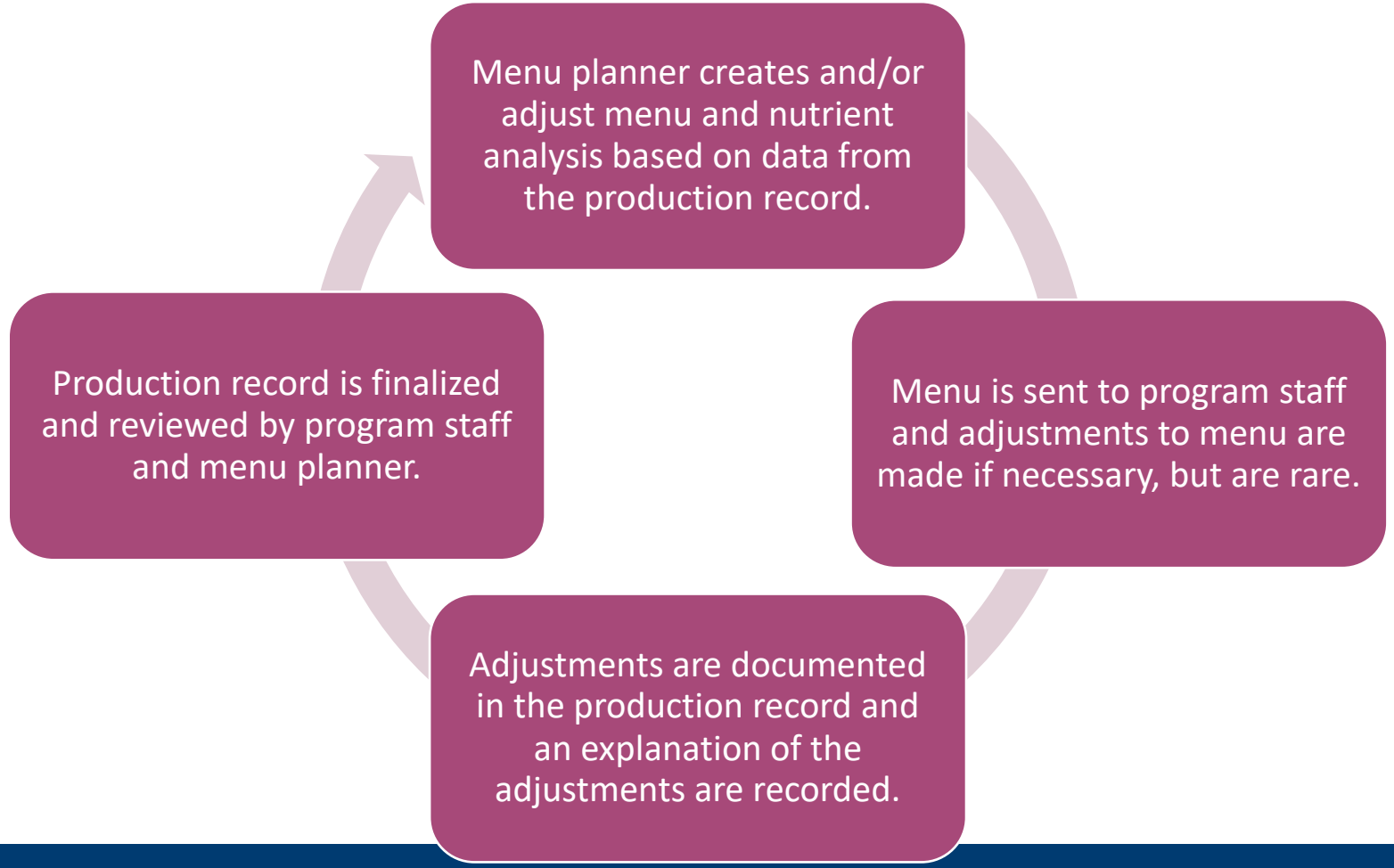
# Most Common Error- 7 CFR 210.10 (c)(4)



Planned menus should be based on **historical data**. This means that the planned, offered, and served menus should be similar. If they are not, the planned menu needs to be adjusted utilizing data from the production record.

(4) ***Adjustments to school menus.*** Schools must adjust future menu cycles to reflect production and how often food items are offered. Schools may need to change the foods offerings given students' selections and may need to modify recipes and other specifications to make sure that meal requirements are met.

# Menu planning should be a continuous process.



Example of production record when a menu is planned linearly:

| | Planned | Prepared | Served |
|---|---|---|---|
| Pizza | 60 | 180 | 145 |
| Salads | 50 | 10 | 9 |
| Rolls | 180 | 120 | 100 |
| French Fries | 70 | 180 | 175 |

Example of production record when a menu is planned using historical data :

| | Planned | Prepared | Served |
|---|---|---|---|
| Pizza | 145 | 150 | 145 |

| Date | Number of Portions Prepped | Notes |
|---|---|---|
| 8/12/2024 | 180 | |
| 10/19/2024 | 170 | |
| 12/20/2024 | 155 | Product changed on order guide |
| 1/5/2025 | 150 | |
| 3/10/2025 | 140 | |

If your staff notice big changes in planned, prepared, or served numbers, train them to right explanations in the comments section of the production record.

15

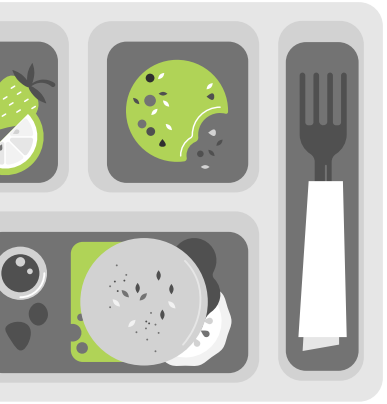
| Comments |
| --- |
| |
| |
| |
| |
| |
| |

# We know it is hard to be precise! Our goal is realistic numbers, not exact numbers!

# Nutrient Analysis



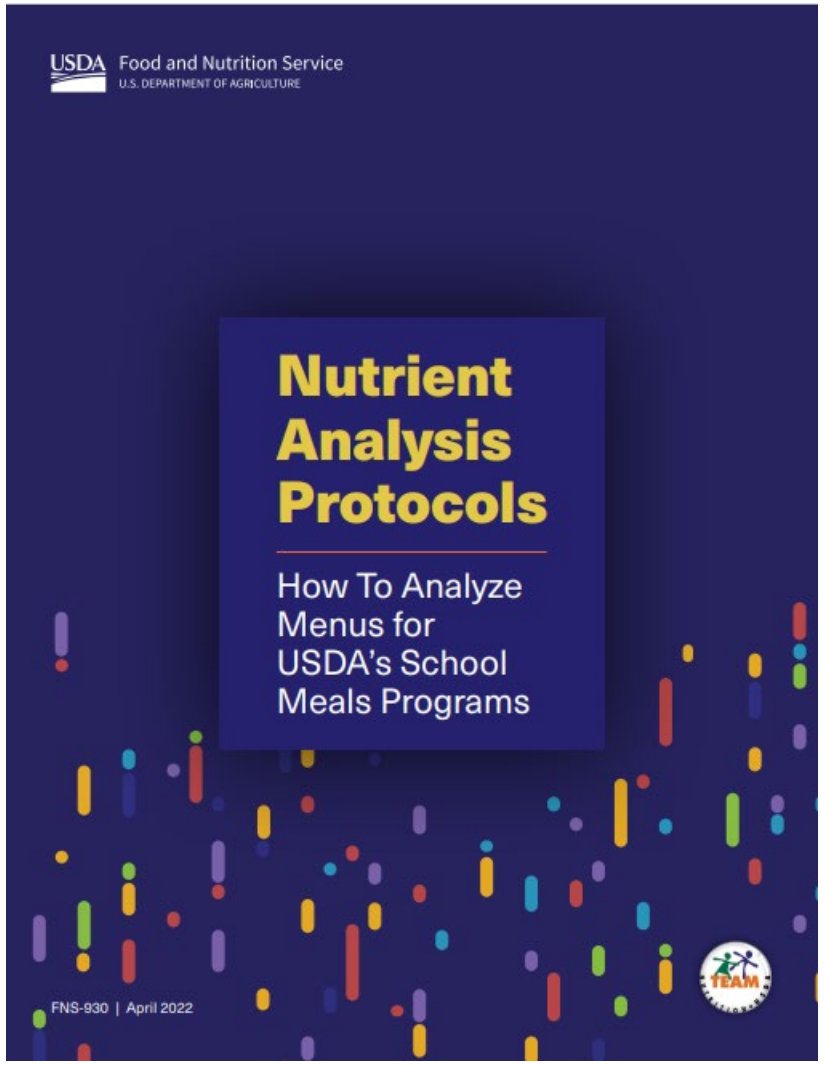
**Proper forecasting ensures that the nutrient contribution of food items is calculated correctly.**



- Calories
- Sodium
- Saturated Fat
- Added Sugar

# Nutrient Analysis






## Common Errors in Data Entry of Menus

These are common errors that can affect your nutrient analysis results. Use this list as a way to check your menus and analysis results.

- Incorrect food item/recipe selected from database
- Wrong serving sizes
- Incorrect feeding figure or number of servings for weighted averaging
- Missing condiments/accompaniments or non-reimbursable items, e.g., mayonnaise, mustard, and/or catsup for hamburgers
- Missing menu items, such as a bun for hamburger; cream cheese or jelly with a bagel; or salad dressing for salads

# Most Common Error- 7 CFR 210.10 (c)(4)



- Excerpt from Nutrient Analysis Protocols from USDA

Menus are planned to meet the nutrient levels of each USDA established age/grade group and menu type offered for breakfast and lunch. The planned menu is what is intended to be offered to the students. It is usually based on forecasting from historical records. For most USDA required nutrient analyses, an analysis of the offered menu, or the menu prepared and set on the line, is used for the nutrient analysis. You also may wish to do a nutrient analysis of your planned menus to help with ensuring that you meet the requirements, but this is not required. Each nutrient analysis software program will have a different order of steps necessary to analyze menu plans, but the following steps will be common to all the software. The result will be the same, a weighted nutrient analysis of your menu.

# Menu Planning



| Date: | 2 | 3a | 3b | 4 | 5 | 6 | 7 | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Participation | MENUS and Recipe Numbers | Plan Prtns | Xtra Prtns | FOOD ITEMS | B | L | S N | CONTRIBUTION SIZE | | | | |
| BREAKFAST SERVED:<br>K-5 _____<br>6-8 _____<br>K-8 _____<br>9-12 _____<br>ADULTS PAID:<br>_____<br>IN KIND:<br>_____<br>TOTAL:<br>_____ | BREAKFAST | | | MEAT/MEAT ALTERNATE | M | M | M | M | | | 9-12 | |
| | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | 2 |
| | | | | | | | | | | | | 3 |
| | | | | | | | | | | | | 4 |
| | | | | | | | | | | | | 5 |
| | | | | | | | | | | | | 6 |
| | | | | | | | | | | | | 7 |
| | | | | | | | | | | | | 8 |
| | | | | | | | | | | | | 9 |
| | | | | | | | | | | | | 10 |
| | | | | | | | | | | | | 11 |
| | | | | | | | | | | | | 12 |
| | | | | | | | | | | | | 13 |
| | | | | VEGETABLE V V V V V V V V V V V V V V | | | | | | | | |
| | | | | | | | | | | | | 14 |
| | | | | | | | | | | | | 15 |
| | | | | | | | | | | | | 16 |
| | | | | | | | | | | | | 17 |
| | | | | | | | | | | | | 18 |
| | | | | | | | | | | | | 19 |
| | | | | | | | | | | | | 20 |
| | | | | | | | | | | | | 21 |
| | | | | | | | | | | | | 22 |
| LUNCHES SERVED:<br>K-5 _____ | | | | | | | | | | | | |

Pizza 60

| | 9 | 10a | 10b | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|
| | Leftover Portions Used Today | Food Prepared Today | | Portions Prepared (9+10a) | Portions Served | Portions Stored | Portions Discarded | Comments |
| | | # Portions | Lbs. Cns. Ea. Etc... | | | | | |
| | M/MA M/MA | M/MA | M/MA M/MA | M/MA M/MA | M/MA M/MA | M/MA M/MA | M/MA | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| | V V V V V V V V V V V V V V V V V V V V V V | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |

180 145

# Nutrient Analysis



**Proper forecasting ensures that the nutrient contribution of food items is calculated correctly.**

Planned: 60

| Nutrient | Standard Value | Actual Value | % of Calories |
|---|---|---|---|
| Calories[1] | [400.00 - 500.00] | 125.38 | |
| Saturated Fat[1] | < 10.00 % of Calories | 2.50 | 17.97 % |
| Sodium Target 1 (mg)[1] | <= 540.00 | 299.01 | |

Served: 145

| Nutrient | Standard Value | Actual Value | % of Calories |
|---|---|---|---|
| Calories[1] | [400.00 - 500.00] | 302.99 | |
| Saturated Fat[1] | < 10.00 % of Calories | 6.05 | 17.97 % |
| Sodium Target 1 (mg)[1] | <= 540.00 | 722.60 | |

Prepared: 180

| Nutrient | Standard Value | Actual Value | % of Calories |
|---|---|---|---|
| Calories[1] | [400.00 - 500.00] | 376.13 | |
| Saturated Fat[1] | < 10.00 % of Calories | 7.51 | 17.97 % |
| Sodium Target 1 (mg)[1] | <= 540.00 | 897.03 | |

The prepared number resulted in an additional 250.75 calories and 598.02 mg of sodium.

*This indicates the need to redo the nutrient analysis, which might impact the menu's compliance with meal pattern. In this example, the weekly average for calories and sodium would increase by 50.15 calories per day and 119.604 mg of sodium per day.

Recipe Used: MRS 2070

# Costs



- Let's figure out how much we our planned number costed us:
  - 162 rolls costs $31.82 ($0.196 per roll)

| | Planned | Prepared | Served |
|---|---|---|---|
| Rolls | 180 | 120 | 100 |
| | $35.28 | $23.52 | $19.60 |

  - $35.28-19.60= $15.68 extra spent on unneeded rolls

# Costs

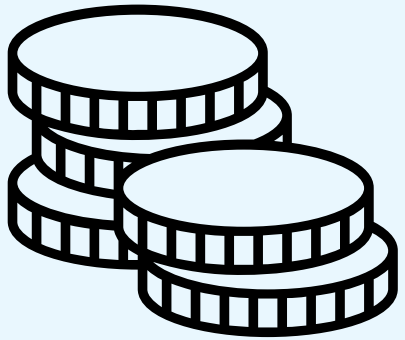


Additional Costs:

- One Time: $35.28-19.60= $15.68 extra spent on unneeded rolls
- Once a Month: $156.80 per school year

What if this happened with all 5 food components?

- $15.68 x 5 components= $78.40
- $15.68 x 5 components x once a month= $784.00

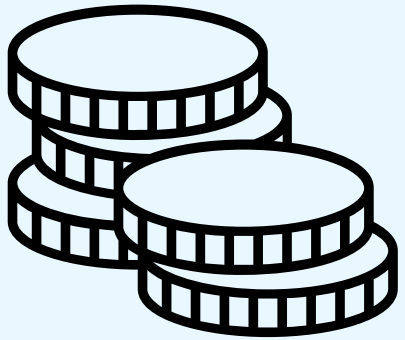


# Costs



Keep in Mind- Your staff does not always understand the financial impact of their program:

- Employees may think that food and supplies do not cost much
- They may not understand where the funding comes from
  - School board provides funding
  - USDA provides food

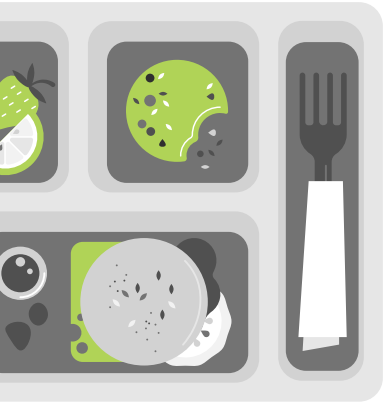


If you are relying on your staff to help you forecast and plan, make sure they understand the impact on your program!

# Menu Matrix Management/Engineering



**Menu Engineering: strategic approach to menu planning in which the menu is evaluated for profitability and customer satisfaction**

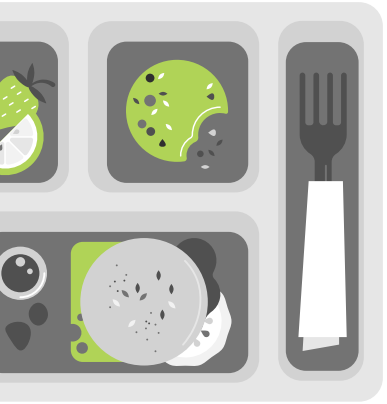


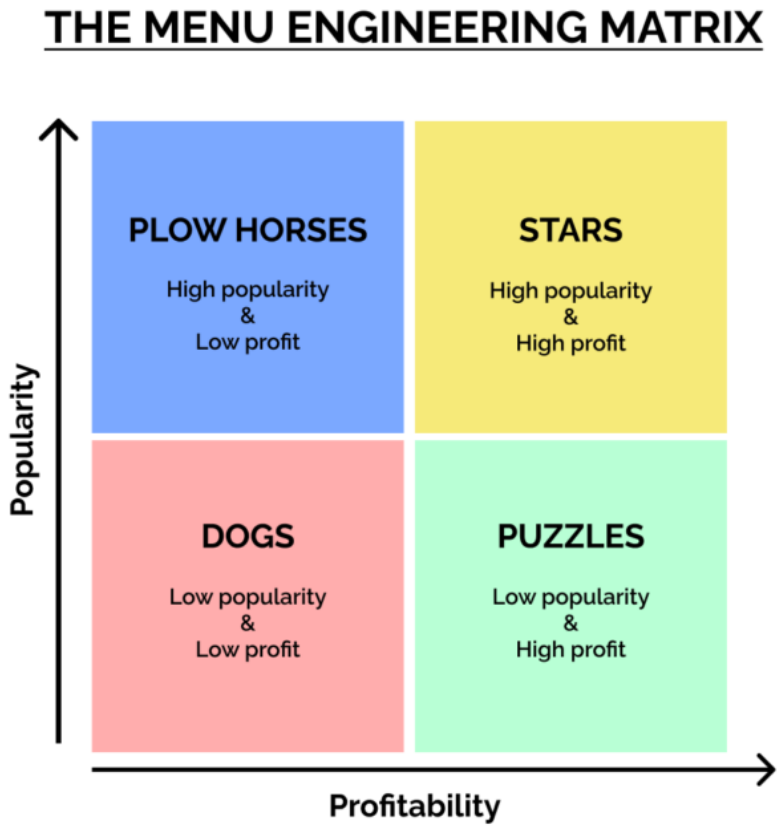
- Two main considerations:
  - Item sales (student selection)
  - Price

# Menu Matrix Management/Engineering



## Menu Engineering: strategic approach to menu planning in which the menu is evaluated for profitability and customer satisfaction





# Menu Matrix Management/Engineering



Gather your data about the popularity of your items through your production record.

| / | 9 | 10a | 10b | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|
| | *Leftover Portions Used Today* | *Food Prepared Today* | | *Portions Prepared (9+10a)* | *Portions Served* | *Portions Stored* | *Portions Discarded* | **Comments** |
| | | # Portions | Lbs, Cns, Ea, Etc... | | | | | |
| | M/MA M/MA | M/MA | M/MA M/MA | M/MA M/MA | M/MA M/MA | M/MA M/MA | M/MA | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |

**Portions served (column 12) should be the number of portions the students selected.**

# Menu Matrix Management/Engineering



## Let's look at an example using production record data.

| Food | Price Per Serving | Number Served (10b) | Classification | Description |
|---|---|---|---|---|
| Sandwich | $0.50 | 50 | Puzzle | Low Popularity/High Profit |
| Chicken Spaghetti | $1.75 | 25 | Dogs | Low Popularity/Low Profit |
| Chicken Strips | $0.75 | 430 | Star | High Popularity/High Profit |
| Pizza | $2.00 | 500 | Plow Horses | High Popularity/Low Profit |

**These are made up prices! Use the order guide to get an accurate price.**

# Menu Matrix Management/Engineering



## Plow Horses- High Popularity/Low Profit

| Food | Price Per Serving | Number Served (10b) | Classification | Description |
|---|---|---|---|---|
| Pizza | $2.00 | 500 | Plow Horses | High Popularity/Low Profit |

- Make less visible on this line/menu
- Put the items later on the serving line

# Menu Matrix Management/Engineering



## Stars- High Popularity/ High Profit

| Food | Price Per Serving | Number Served (10b) | Classification | Description |
|---|---|---|---|---|
| Chicken Strips | $0.75 | 430 | Star | High Popularity/High Profit |

- Ensure predictable availability- make sure your students know what days they can get this item
- Highlight these items on your lines and on student/parent menus

# Menu Matrix Management/Engineering



## Dogs- Low Popularity/ Low Profit

| Food | Price Per Serving | Number Served (10b) | Classification | Description |
|---|---|---|---|---|
| Chicken Spaghetti | $1.75 | 25 | Dogs | Low Popularity/Low Profit |

- Serve the item with different choices to determine if the popularity of the item is negatively impacted by the other available choices.
- Pay attention to the students that are picking up the item. Will they eat with you if the item is removed?
- Remove the item from the menu.

# Menu Matrix Management/Engineering



## Puzzles- Low Popularity, High Profit

| Food | Price Per Serving | Number Served (10b) | Classification | Description |
|---|---|---|---|---|
| Sandwich | $0.50 | 50 | Puzzle | Low Popularity/High Profit |

- Visually highlight the item in the student/parent menu
- Provide an item description in the menu
- Promote/highlight the item on the line
- Make small changes in the recipe and assess acceptance of the changes (product testing)

# Menu Matrix Management/Engineering



## Things to Consider for Child Nutrition:

- Nutrients in the items do need to be considered as you are planning your menu.
- Consider your staff ability and the labor requirements for the menu items.
- Use this data to explain your menu planning if necessary.
- Student preferences change, so evaluate your items multiple times per year.

# Meal Pattern Compliance



- Meal Period: Breakfast
- Total number of meals: 100

| Food Item | Number of Servings |
|---|---|
| Bananas | 15 |
| Fruit Cocktail | 45 |
| Grapes | 15 |

- Total fruit and vegetable amounts must equal at least the number of meals you are serving
- Breakdown of example:
  - 15 +45+ 15= 75 servings of fruit
  - 100 meals total- 75 servings of fruit= 25 meals that did not include the required ½ cup serving of fruit
  - This would be non-reimbursable.

# Meal Pattern Compliance



- Meal Period: Breakfast
- Total number of meals: 100

| Food Item | Number of Servings |
|---|---|
| Sausage Biscuit | 80 |
| Fruit Cocktail | 75 |
| Apple | 50 |
| Milk | 65 |

- Total amount of all servings divided by number of meal can indicate the number of items a child is picking up.
- Breakdown of example:
  - 80+ 75+ 50+65 = 270 items served
  - Breakfast requires 3 items per meal.
  - 270 items/ 100 meals= 2.7 items on average.
  - This would be non-reimbursable.

# Meal Pattern Compliance



- The amount of food used to prepare the items (10b), must support the number of portions prepared (11) and serving sizes listed.

**MEAL COMPONENT CONTRIBUTION:**
2 oz. eq. meat/meat alternate, 1 oz. eq. whole grain
**NUMBER OF PORTIONS:** 100 **SIZE OF PORTION:** ¾ cup
**RECIPE HACCP PROCESS:** #2 - Same day service

| INGREDIENT | MEASURE (FOR 100 SERVINGS) |
|---|---|
| Chicken, Diced, Cooked, IQF, #1019 | 13 pounds + 8 ounces |

| 9 | 10a | 10b | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|
| *Leftover Portions Used Today* | *Food Prepared Today* | | *Portions Prepared (9+10a)* | *Portions Served* | *Portions Stored* | *Portions Discarded* |
| | # Portions | Lbs, Cns, Ea, Etc... | | | | |
| | | 10lb 5oz | 100 | | | |

# Meal Pattern Compliance



- Meal Period: Lunch
- Total number of meals: 100

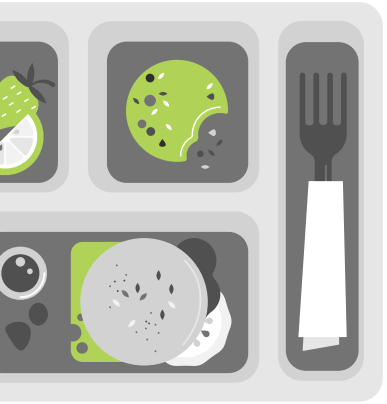
| Food Item | Number of Servings |
|---|---|
| Pizza | 60 |
| Chef Salad | 25 |
| Hamburger | 40 |

- Number of entrée items should not exceed your number of meals
- Breakdown of example:
  - We served 100 meals today (this includes all meal types), so we expect no more than 100 entrees to be served.
  - 60 pizza slices were served and 40 hamburgers were served, which is a total of 100 meals.
  - The chef salad should be an entrée, but that would make the total entrée number 125. The number of servings might indicate that they are allowing the chef salad as a side item.

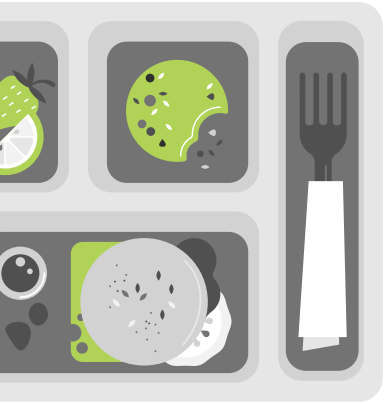
# Recap



**Forecasting is important to your foodservice operation! Your production record can tell you so much about your foodservice.**



- Nutrient Analysis/ Meal Pattern Compliance
- Budget/Food Costs
- Marketing
- Meal Pattern Compliance



# Questions/
# Open Discussion

# Betsy Pennington, MS, RD, LD

Lead Registered Dietitian Nutritionist

bpennington@mdek12.org